

The background of the cover is a photograph of the ornate wooden double doors of the Supreme Court of Missouri. The doors are dark wood with brass studs and handles. Above the doors is a stone pediment with a central relief of a woman's head. A large, semi-transparent blue arch is superimposed over the image, framing the title text.

# MISSOURI VEHICLE STOPS 2023 ANNUAL REPORT

MISSOURI ATTORNEY GENERAL'S OFFICE



# Missouri Vehicle Stops 2023 Annual Report

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# ANDREW BAILEY

## Missouri Attorney General

### ANDREW BAILEY SERVES AS MISSOURI'S 44<sup>TH</sup> ATTORNEY GENERAL



Andrew Bailey  
Missouri Attorney General

As the chief lawyer for the State of Missouri, my job is to protect each and every one of our six million citizens from crime, abuse and fraud, a responsibility I take very seriously. Our government, the shared responsibility between the citizens of our state and the elected officials, must be a framework that preserves all citizens' rights to life, liberty and pursuit of happiness.

The office of the Missouri Attorney General is required, by law, to collect data on the demographics of the traffic stops made by law enforcement officers from across the state, and to report these findings to the Governor and the public. Importantly, this data can help government and law enforcement determine any issues with disparities related to stops and searches.

This report aggregates the traffic stops data from 508 law enforcement agencies

across the state, breaking down the data as it relates to race, the number of stops, the search rate, contraband hit rate and arrest rates. In 2019, we identified several changes to questions that officers must answer when making a stop that we believe will make future reports more informative. This includes questions relating to the officer's assignment, the residential zip code of the driver stopped and the reason for issuing a citation or warning. This data provides more context for the data collected and was fully available in the 2021 report.

As we seek to balance the rights of all citizens of our state with the enforcement of the rule of law, and the brave men and women of law enforcement who put their lives on the line every day to protect us, we will continue to improve this report.

# BACKGROUND

Concerns by the citizens of Missouri and the Missouri legislature regarding allegations of bias in traffic enforcement prompted the passage of SB 1053 (2000). SB 1053 created Section 590.650, RSMo. which became effective August 28, 2000. This statute created the Vehicle Stops Report and required that the Attorney General's Office collect and report on traffic stops conducted by law enforcement officers across the State of Missouri.

Under § 590.650, RSMo. all peace officers in the state must report specific information, including a driver's race, for each vehicle stop made in the state. Law enforcement agencies must provide their vehicle stops data to the Attorney General by March 1, and the Attorney General must compile the data and report to the Governor, General Assembly, and each law enforcement agency no later than June 1 of each year. The law allows the Governor to withhold state funds for any agency that does not submit its vehicle stops data to the Attorney General by the statutory deadline.

After reviewing analysis of the Vehicle Stops Report (VSR) and conferring with law enforcement leaders across the state in 2019, the Attorney General's Office (AGO) began implementing comprehensive changes to the VSR. These changes improved

the information collected for the report while allowing for a fundamental shift in the level of analysis possible through the VSR. Three new questions have been added to the report that collect information on officer assignment during the stop, the residential zip code of the stopped driver, and the cause of citations and/or warnings issued to the driver. In addition, other questions have been adjusted for clarity or to improve the value of the data they collect by adding new response options.

Additional improvements to the VSR may become feasible as more agencies report detailed incident-level data on traffic stops. Currently, most agencies only report the aggregate numbers of stops meeting the criteria for each question broken down only by the race and ethnicity of the individual involved in the stop. This reporting framework prevents more in-depth analyses that take into consideration other factors such as driver age, driver sex, and time of stop. Multi-variate analysis of incident-level data will significantly improve the informational content of the VSR. The AGO has implemented an optional data reporting framework that collects detailed information for each stop an agency made during the year, rather than just totals by race for each agency. These changes

became effective January 2020 and implementation efforts across the state are ongoing.

The aggregate data reported in the VSR provides a detailed comparison of differences in stops and outcomes of stops by race and ethnicity, for the state overall and for each agency. The VSR also reports relevant population data and calculates stop rates for the purpose of comparing differences by race and ethnicity relative to population, for the state and for each agency. However, beginning this year, the VSR no longer calculates the "Disparity Index" for each agency or overall for the state. This is because the Disparity Index is both redundant and problematic as a summary measure for understanding differences in traffic stops across population groups (see appendix).

The summary of statewide vehicle stops data has been provided by a team of researchers in the Economic and Policy Analysis Center at the University of Missouri in Columbia. The team is led by Dr. Brittany Street, Assistant Professor of Economics; other team members include Dr. Jeffrey Milyo, Professor and Chair of the Department of Economics, and Dr. Tabitha Chikhladze, Assistant Teaching Professor.



# STATEWIDE METRICS

This report summarizes traffic stop data from 538 law enforcement agencies in Missouri that reported data for calendar year 2023. Of these, 30 agencies reported no traffic stops during the year; these agencies often contract out traffic enforcement to another agency covering their jurisdictions and focus on other enforcement activities.<sup>1</sup> In total, this report represents 95% of the 569 active law enforcement agencies in the state. The statewide data described in this section are also presented in the same manner for each agency in the attached agency reports.



<sup>1</sup>Agencies with zero stops include: Alma Police Dept, Appleton City Police Dept, Arcadia Police Dept, Camden Police Dept, Cameron Schools Police Dept, Clark Police Dept, Corder Police Dept, Crowder College Police Dept, Crystal Lakes Police Dept, East Lynne Police Dept, Glen Echo Park Police Dept, Green City School District Police Dept, Humansville Police Dept, Jackson County Drug Task Force, Laddonia Police Dept, Missouri Department of Revenue, Missouri Division of Alcohol & Tobacco, Pasadena Hills Police Dept, Springfield School Police, St. Charles Community College Police, St. Louis Community College Police Dept, Union Pacific RR Police-Kansas City, Wardell Police Dept, Waverly Police Dept





# STATEWIDE METRICS CONTINUED

The 2023 VSR can be viewed as representing the new equilibrium after many years of interpreting the VSR through the context of the COVID-19 environment, which disrupted normal driving patterns and police operations. Although patterns are returning to normal, policing practices in some instances may still look different from 2019. That said, the 2023 report reflects conditions under the “new normal.” In 2023, overall stops

increased by 7% and arrests increased by 17% from 2022, while stops remained 10% and arrests 22.5% lower than 2019 levels. Searches were 17% lower than in 2022 and 39.5% lower than in 2019. Hit rates (i.e., rate of finding contraband per search) were also down by 35% in 2023 relative to 2019 and 2022.

In 2023, the agencies filing reports recorded 1,367,150 vehicle stops, resulting in 61,990 searches and 57,713 arrests.

Table 1 provides summary data on stops, searches, arrests, and citations, broken out by race and ethnic group; this facilitates comparisons across groups and over time using past reports.<sup>2</sup> More detailed data on vehicle stops and outcomes of stops are listed in Tables 4 and 5, located at the end of this report.<sup>3</sup>

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<sup>2</sup> Race and ethnicity are recorded based on officer perception at the time of the vehicle stop.

<sup>3</sup> The analysis in the report is based on the aggregated data reported by each agency. Thus, it relies on the assumption of accuracy in the reported data in terms of the tallying of stops and resulting outcomes, the distinction between resident and non-resident drivers, etc.



# TABLE 1: RATES BY RACE FOR MISSOURI

|                       | Total   | White   | Black  | Hispanic | Native American | Asian  | Other  |
|-----------------------|---------|---------|--------|----------|-----------------|--------|--------|
| <b>Population</b>     |         |         |        |          |                 |        |        |
| 2022 ACS pop.         | 4940395 | 3925816 | 535423 | 191155   | 14295           | 105151 | 285027 |
| 2022 ACS pop. %       | 100     | 79.46   | 10.84  | 3.87     | .29             | 2.13   | 5.77   |
| 2020 Decennial pop.   | 4775612 | 3723642 | 514169 | 197173   | 18642           | 104558 | 217428 |
| 2020 Decennial pop. % | 100     | 77.97   | 10.77  | 4.13     | .39             | 2.19   | 4.55   |
| <b>Totals</b>         |         |         |        |          |                 |        |        |
| All stops             | 1367150 | 1053004 | 235979 | 42736    | 2288            | 14148  | 18995  |
| Resident stops        | 684743  | 565766  | 89428  | 18403    | 837             | 5583   | 4726   |
| Searches              | 61990   | 45701   | 12276  | 2739     | 92              | 324    | 858    |
| Contraband            | 14757   | 11652   | 2522   | 446      | 12              | 51     | 74     |
| Arrests               | 57713   | 43226   | 11326  | 2387     | 92              | 308    | 374    |
| Citations             | 567793  | 403112  | 130403 | 21532    | 908             | 6478   | 5360   |
| <b>Rates</b>          |         |         |        |          |                 |        |        |
| Stop rate             | 27.67   | 26.82   | 44.07  | 22.36    | 16.01           | 13.45  | 6.66   |
| Stop rate, residents  | 13.86   | 14.41   | 16.7   | 9.63     | 5.86            | 5.31   | 1.66   |
| Search rate           | 4.53    | 4.34    | 5.2    | 6.41     | 4.02            | 2.29   | 4.52   |
| Contraband hit rate   | 23.81   | 25.5    | 20.54  | 16.28    | 13.04           | 15.74  | 8.62   |
| Arrest rate           | 4.22    | 4.11    | 4.8    | 5.59     | 4.02            | 2.18   | 1.97   |
| Citation rate         | 41.53   | 38.28   | 55.26  | 50.38    | 39.69           | 45.79  | 28.22  |

*Notes: The American Community Survey five-year population estimates for ages 16+ as of 2022 are used for Missouri. The ACS only provides race-specific Hispanic estimates for White, meaning non-White Hispanic residents are double-counted in the 2022 race percentages above.*

*Stop rate = (stops / 2022 population) X 100.*

*Stop rate, residents only = (stops by residents / 2022 population) X 100.*

*Search rate = (searches / stops) X 100.*

*Contraband hit rate = (searches with contraband found / total searches) X 100.*

*Arrest rate = (arrests / stops) X 100.*

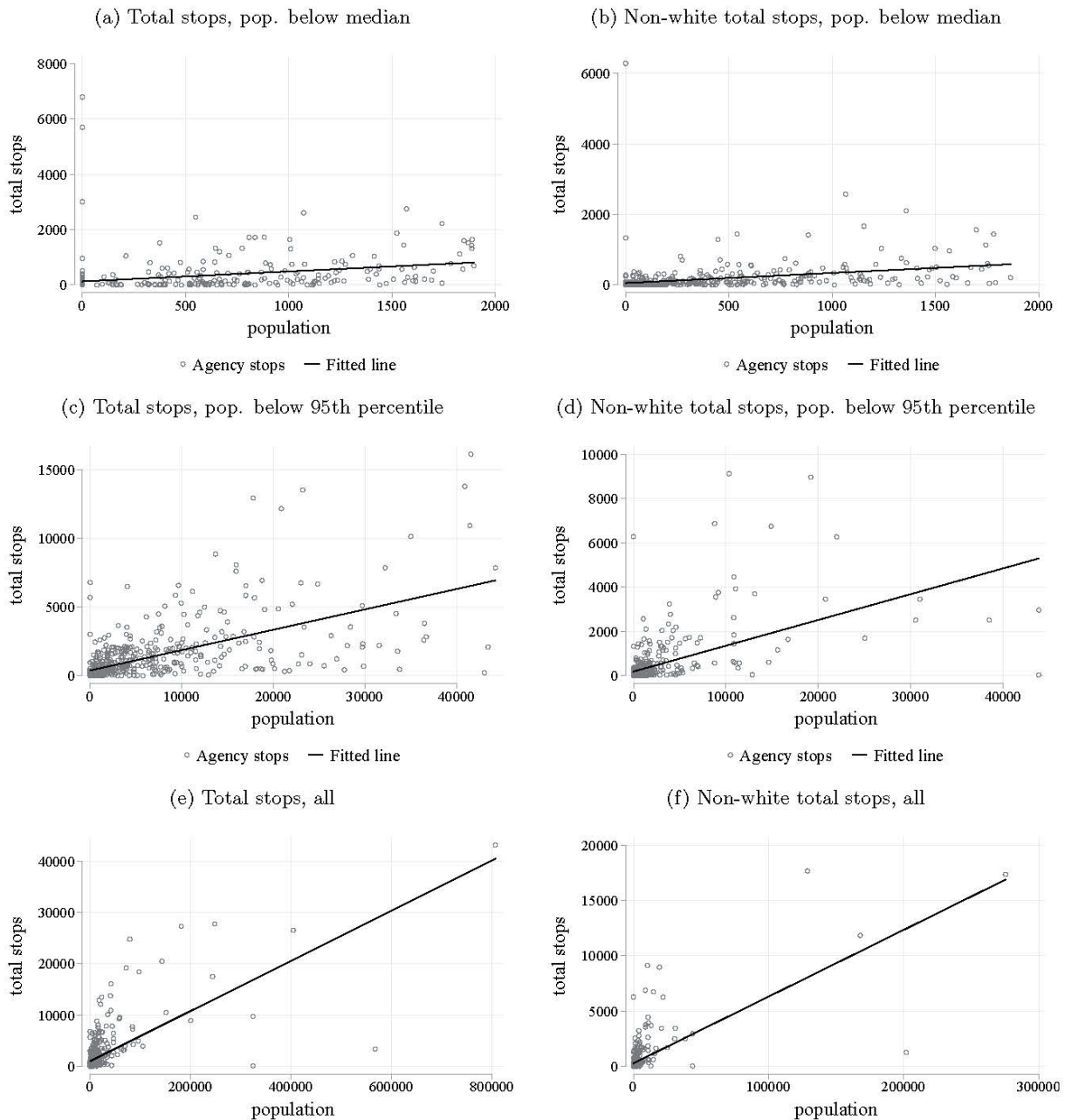
*Citation rate = (citations / stops) X 100.*

Table 1 lists the number of traffic stops for residents of the community served by a particular agency. Stop rates are therefore calculated for all stops and for the subset of vehicle stops involving only residents. However, because only aggregate data is currently required to be reported by agencies, it is not possible to calculate search rates, arrest rates, etc. for residents, nor is it possible to break down the detailed data in Tables 4 and 5 (below) for residents only. In the future, as more agencies report incident-level data, a more detailed breakdown of data by residence will be feasible. For consistency and ease of exposition, all subsequent discussion of these data refers to total vehicle stops by agencies.

Figure 1 provides more context by comparing traffic stops by agencies to their associated community population for both the total population (left side) and the non-white population (right-side) in each community. For example, the Columbia Police Department is matched to the total and non-white population for the city of Columbia, and so on. Agencies that do not match directly to census geographies, such as university and airport police, are assigned a population of zero.



# FIGURE 1: TOTAL STOPS ACROSS AGENCIES FOR MISSOURI



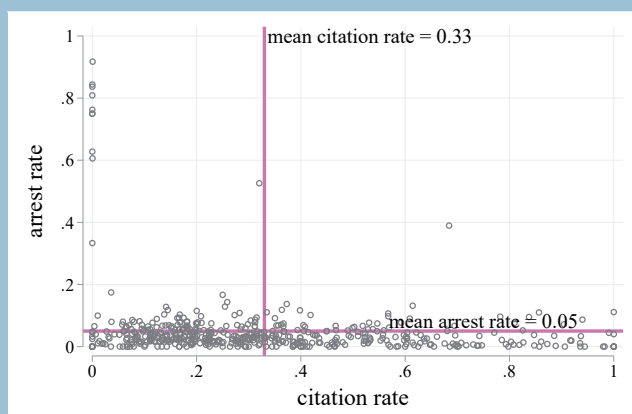
Notes: Figure (a) depicts the total number of stops for all agencies with a total population less than the median population size (1,896.5 persons) in Missouri plotted against population size. Similarly, Figure (b) shows the total number of non-white stops by the non-white population size for each agency for those same agencies. Figures (c) and (d) follow the same format but for agencies with a total population less than the 95th-percentile (46,171 persons). Finally, graphs (e) and (f) graph all agencies, except the Missouri State Highway Patrol, which covers the entire state. Population is measured using the 2022 American Community Survey 5-year estimates for Missouri. The ACS only provides race-specific Hispanic estimates for Whites. To avoid double counting, we calculate the total non-White population as the total population minus the Non-Hispanic White population for each agency. Agencies without population (e.g., university police) are considered to have a population of zero.

The panels in Figure 1 are split across three rows according to community size; this facilitates comparisons across agencies serving similar-size communities. The panels in the first row focus only on agencies serving smaller communities (less than median population, or 1,953 persons), while the second row of panels covers agencies serving all but the largest 5% of cities (i.e., communities with less than 43,795 persons) and the last row of panels includes all agencies, except the Missouri State Highway Patrol. Each panel in Figure 1 also includes a “best fit” line that indicates the relationship between stops and population (i.e., the stop rate for the agencies and communities listed in each panel). The agency detailed reports replicate Figure 1 and highlight the location of each agency in this figure, which facilitates comparisons to other agencies.

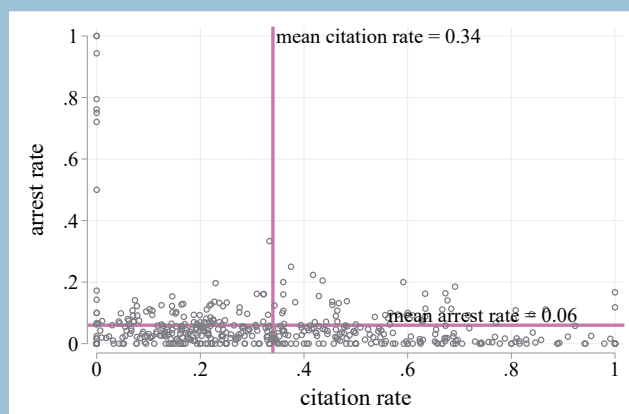
## FIGURE 2: CITATION, ARREST, SEARCH AND HIT RATES ACROSS AGENCIES FOR MISSOURI

Figure 2 describes the other outcomes of interest for vehicle stops (i.e., arrests, citations, searches and the discovery of contraband during a search, or “hits”), by the agency. The data are reported as rates, for all stops (left side) and for only stops involving the non-white population (right side).

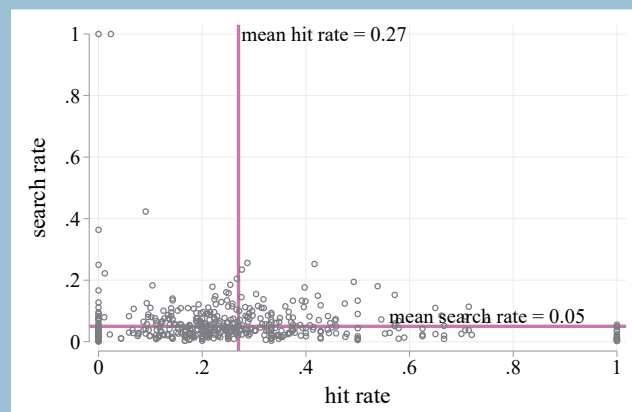
(a) Arrest and citation rate



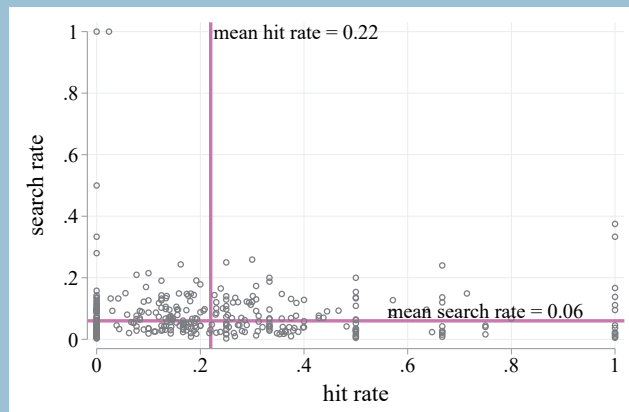
(b) Non-white arrest and citation rate



(c) Search and hit rate



(d) Non-white search and hit rate



Notes: Figure (a) graphs the arrest rate and citation rate for all agencies in Missouri. Similarly, Figure (b) graphs the arrest rate and citation rate for all non-white stops. Figure (c) graphs the search rate and hit rate for all agencies in Missouri. Similarly, Figure (d) graphs the search rate for all non-white stops and hit rate for all non-white searches.

The panels in the first row of Figure 2 show the distribution of agency citation rates and arrest rates per 100 stops compared to the average rates for all agencies. Agencies located in the upper right quadrants of these figures exhibit higher than average arrest and citation rates, while those in the lower left quadrant exhibit lower than average rates for both arrests and citations.



The panels in the second row of Figure 2 describe the search rate per 100 stops and the contraband hit rate per search, as well as the mean for these rates across all agencies.<sup>4</sup> Agencies in the lower right quadrant conduct relatively few searches with higher contraband hit rates. Agencies in the upper left quadrant conduct relatively more searches with fewer contraband hit rates. The agency detail reports replicate Figure 2 and highlight the location of each agency in the figure.

## DATA LIMITATIONS FOR COMPARING DIFFERENCES

When comparing these summary metrics across agencies or different population groups, several caveats must be considered. First, driving patterns and composition of the driving communities. Second, traffic enforcement, the frequency of calls to police, and discretionary stops and searches also vary across agencies. Consequently, agencies may exhibit different stop rates or search rates due to the composition of drivers encountered by the agency, the enforcement policies implemented by the agency, or some combination of these and other factors.

For example, traffic stops that are the result of investigative stops or emergency calls may generate higher arrest rates than stops resulting from the enforcement of speed limits. Similarly, an arrest will almost always lead to a search, while searches of motorists during routine traffic stops are likely more rare and highly discretionary. Any comparison of search rates and hit rates must then consider the frequency of discretionary searches. As more agencies report incident-level data, accounting for such distinctions may become possible in subsequent reports.

The same caveats apply when examining disparities in traffic stops and resulting outcomes across racial and ethnic groups. Observed differences may result from differential impacts of policing, differential treatment by police, or some combination of these and other factors. Differential treatment refers to bias (unintended or not), whereas differential impact refers to several potential sources of disparities that are not a direct result of bias on the part of officers conducting vehicle stops. An example of differential impact would be if one population group has more outstanding warrants on average, then that group would have a higher arrest rate not because officers' actions were different with respect to each group, but because the same enforcement action, arresting drivers with outstanding warrants, disproportionately impacts one group more than another.

The sources of disparate impacts are themselves of interest and should be considered by policymakers and the public, but they are not the direct result of differential treatment by officers conducting vehicle stops. Consequently, the presence of large or persistent disparities is not necessarily an indication of bias in policing. For these reasons, no single metric is capable of identifying or disproving bias in policing. Instead, these data are presented for the purpose of informing a continuing conversation among the public and policymakers regarding differences in traffic stops and outcomes across agencies, as well as differences in these measures across racial and ethnic groups. However, any analysis of such differences must take into consideration that disparities across population groups may be generated by many factors, including:

- Policing strategies and policies: Law enforcement officials make strategic choices on where and when to police that may disproportionately impact various racial/ethnic groups. Strategies such as concentrating patrols in areas within a city with higher crime rates, could lead to a disproportionate impact if that area has a higher concentration of a racial/ethnic group than the jurisdiction as a whole. (Disparate impact)
- Differences in *real* rates of offending between racial/ethnic groups: The correlation of dynamics such as economic disparity between different racial groups may lead to differences in rates of real offending. If there are real differences in offending rates, traffic stops should theoretically increase or decrease accordingly. (Disparate impact)
- Explicit bias: Explicit bias refers to conscious bias towards a specific group. (Disparate treatment)
- Incorrect population benchmark: Estimated population characteristics may not accurately measure the racial and ethnic composition of drivers. Further, changes in population demographics may not be fully captured in population estimates. (Measurement error)

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<sup>4</sup> Agencies that conduct very few searches will be more likely to cluster at quotients of small values, such as 0, .5, and 1 for the search and hit rates. This effect is particularly noticeable in the non-White search and hit rate charts due to smaller raw counts of searches for this population.

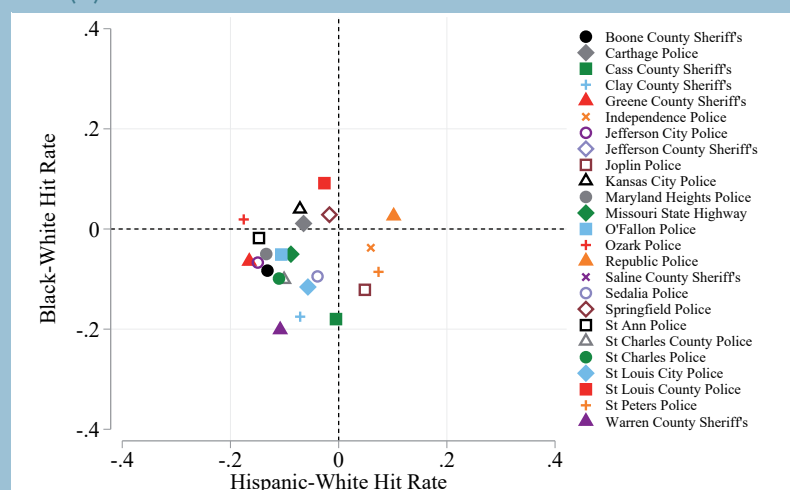
## DIFFERENTIAL HIT RATES

A “hit rate” is the rate at which contraband is located pursuant to a search. In addition to the metrics described in Table 1 above, a frequently employed proxy for bias in searches is the difference in contraband “hit rates” across groups.

The analytical benefit of differential hit rates is based on the maintained assumption that all searches are discretionary. However, this is not always the case. As an example, for obvious reasons such as officer safety and investigative integrity, many agencies have a policy of searching any individual after being arrested. Additionally, when law enforcement arrests a driver and impounds the vehicle, the officer will likely conduct an inventory search of the vehicle pursuant to agency policy. These searches, searches incident to arrest and inventory searches, differ from vehicle searches based on probable cause to believe contraband will be located. Thus, a high number of arrests might skew the hit rate with non-discretionary searches. The aggregate data reported by most agencies does not allow for any distinction between searches based on probable cause and searches incident to arrest or inventory searches, but as more agencies report incident-level data, such a distinction will be feasible. Yet another consideration is that large differences in search rates across groups may be considered problematic even if hit rates are equalized across racial and ethnic groups, since searches are invasive. For this reason, it is useful to consider the frequency of searches alongside hit rates. Finally, because searches are relatively infrequent, a comparison of differential hit rates is not informative unless there are a sufficient number of searches conducted for each population group.

### FIGURE 3: RELATIVE HIT RATES FOR THE TOP 25 AGENCIES WITH THE MOST SEARCHES

(a) 2023



Notes: The race specific hit rate is calculated as the number of searches that find contraband divided by the total number of searches for a specific race. The difference between the Black and White hit rates and the Hispanic and White hit rates are plotted on the y- and x-axis, respectively.

(b) 2013

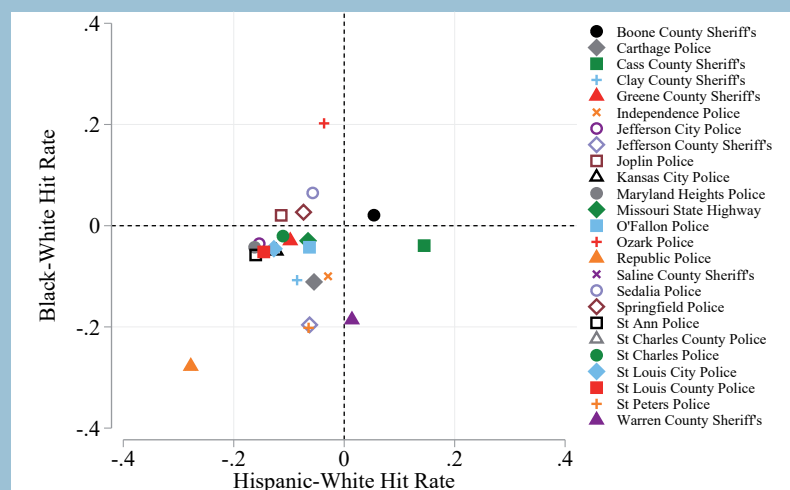


Figure 3 shows the differential hit rates for the 25 largest agencies in the state by the number of searches; the same agencies are shown for two snapshots in time: 2023 (in panel a) and 2013 (in panel b). The data are plotted such that the lower-left quadrant is associated with theoretical “over-searching” the Black and Hispanic population relative to the White population. The upper-right quadrant is associated with theoretical “over-searching” the White population relative to the Black and Hispanic population. If all searches are discretionary, then unbiased searches would result in all agencies being located at the origin in the figures (0,0). However, deviations from the center are expected, since not all searches are discretionary. Consequently, the location of a given agency in these figures is not necessarily an indication of bias in searches by police, but persistent outliers may warrant further examination.



Looking across the two panels of Figure 3, it is apparent that differential hit rates have drifted over time away from the lower-left quadrant associated with theoretical over-searching Black and Hispanic motorists, and toward the upper-right quadrant associated with theoretical under-searching of Black and Hispanic motorists. However, this apparent shift is based only on these two snapshots in time, so it may be the result of random variation in the data as opposed to a persistent trend. Future reports will explore patterns in differential hit rates over time and across agencies in more detail. And as more agencies report incident-level data on stops, it will be possible to calculate differential hit rates using only the subset of discretionary searches.

Tables 4 and 5 provide more detailed information on traffic stops, also broken down by race and ethnic group. The agency reports follow the same presentation format as shown here, but exclude the figures showing differential hit rates by community.

## TABLE 4: NUMBERS OF STOPS BY RACE FOR MISSOURI

|                                   | Total   | White   | Black  | Hispanic | Native American | Asian | Other |
|-----------------------------------|---------|---------|--------|----------|-----------------|-------|-------|
| <b>All Stops</b>                  | 1367150 | 1053004 | 235979 | 42736    | 2288            | 14148 | 18995 |
| Resident Stops                    | 684743  | 565766  | 89428  | 18403    | 837             | 5583  | 4726  |
| Non-Resident Stops                | 682407  | 487238  | 146551 | 24333    | 1451            | 8565  | 14269 |
| <b>Reason for Stop</b>            | .       | .       | .      | .        | .               | .     | .     |
| Moving                            | 764841  | 591566  | 123633 | 27901    | 1497            | 10354 | 9890  |
| Equipment                         | 176482  | 139933  | 26997  | 5319     | 282             | 1438  | 2513  |
| License                           | 452847  | 338247  | 95981  | 9733     | 527             | 2371  | 5988  |
| Investigative                     | 39991   | 27833   | 9218   | 1491     | 70              | 345   | 1034  |
| Called for Service                | 10513   | 7294    | 2511   | 346      | 22              | 74    | 266   |
| Officer Initiative                | 16649   | 11896   | 3620   | 700      | 33              | 138   | 262   |
| Det./Crime Bulletin               | 1553    | 999     | 450    | 31       | 1               | 8     | 64    |
| Other                             | 11275   | 7686    | 2692   | 447      | 19              | 133   | 298   |
| <b>Stop Outcome</b>               | .       | .       | .      | .        | .               | .     | .     |
| Searches                          | 61990   | 45701   | 12276  | 2739     | 92              | 324   | 858   |
| Contraband                        | 14757   | 11652   | 2522   | 446      | 12              | 51    | 74    |
| Arrests                           | 57713   | 43226   | 11326  | 2387     | 92              | 308   | 374   |
| Citation                          | 567793  | 403112  | 130403 | 21532    | 908             | 6478  | 5360  |
| Warning                           | 1047626 | 847394  | 142459 | 33746    | 1569            | 10564 | 11894 |
| No action                         | 36554   | 24609   | 8780   | 1803     | 83              | 363   | 916   |
| <b>Citation/warning violation</b> | .       | .       | .      | .        | .               | .     | .     |
| Moving                            | 765395  | 595607  | 118645 | 29570    | 1477            | 11283 | 8813  |
| Equipment                         | 250111  | 200309  | 36890  | 8232     | 353             | 2006  | 2321  |
| License/Registration              | 595274  | 453120  | 113346 | 18321    | 704             | 3736  | 6047  |
| <b>Arrest violation</b>           | .       | .       | .      | .        | .               | .     | .     |
| Outstanding warrant               | 24071   | 16521   | 6706   | 555      | 31              | 79    | 179   |
| Drug Violation                    | 5842    | 4812    | 766    | 91       | 7               | 7     | 159   |
| Resist Arrest                     | 1808    | 1138    | 582    | 65       | 3               | 8     | 12    |
| Off Against Person                | 3239    | 2579    | 536    | 96       | 2               | 6     | 20    |
| Traffic                           | 14866   | 10675   | 3135   | 813      | 37              | 88    | 118   |
| DWI/BAC                           | 14919   | 11195   | 2349   | 1063     | 29              | 148   | 135   |
| Property                          | 1353    | 891     | 411    | 37       | 2               | 6     | 6     |
| Other                             | 4835    | 3819    | 819    | 141      | 4               | 16    | 36    |
| <b>Officer Assignment</b>         | .       | .       | .      | .        | .               | .     | .     |
| General Parol                     | 1131834 | 889809  | 178094 | 36448    | 1928            | 11878 | 13677 |
| Dedicated Traffic                 | 164842  | 117494  | 37440  | 4674     | 225             | 1624  | 3385  |
| Special Assignment                | 43552   | 33319   | 7800   | 1319     | 97              | 475   | 542   |
| <b>Location of Stop</b>           | .       | .       | .      | .        | .               | .     | .     |
| Interstate hwy                    | 165213  | 113052  | 37900  | 9113     | 403             | 3284  | 1461  |
| US hwy                            | 237522  | 198071  | 26786  | 8175     | 399             | 2359  | 1732  |
| State hwy                         | 323395  | 272562  | 36016  | 8609     | 487             | 2476  | 3245  |
| County road                       | 83004   | 58824   | 20405  | 1337     | 146             | 834   | 1458  |
| City street                       | 484820  | 360582  | 95981  | 14676    | 733             | 4619  | 8229  |
| Other                             | 73232   | 50312   | 18924  | 838      | 119             | 605   | 2434  |
| <b>Driver Gender</b>              | .       | .       | .      | .        | .               | .     | .     |
| Male                              | 837542  | 642649  | 140122 | 32021    | 1584            | 9454  | 11712 |
| Female                            | 529119  | 410772  | 95910  | 10714    | 704             | 4694  | 6325  |
| <b>Driver Age</b>                 | .       | .       | .      | .        | .               | .     | .     |
| 17 and under                      | 51848   | 44509   | 4795   | 1387     | 66              | 298   | 793   |
| 18-29                             | 466674  | 342160  | 93532  | 17966    | 943             | 5249  | 6824  |
| 30-39                             | 331029  | 243388  | 67160  | 11866    | 556             | 3335  | 4724  |
| 40-64                             | 440378  | 356289  | 62913  | 10952    | 653             | 4700  | 4871  |
| 65 and over                       | 75616   | 66982   | 6599   | 563      | 69              | 562   | 841   |

Table 4 Note: Data reported by the agency to the Attorney General's Office covering all traffic stops in 2023.

## TABLE 5:

# SEARCH STATISTICS BY RACE FOR MISSOURI

|                         | Total | White | Black | Hispanic | Native American | Asian | Other |
|-------------------------|-------|-------|-------|----------|-----------------|-------|-------|
| <b>Probable cause</b>   | .     | .     | .     | .        | .               | .     | .     |
| Consent                 | 28185 | 22109 | 4389  | 1021     | 41              | 148   | 477   |
| Inventory               | 5557  | 3981  | 1227  | 270      | 3               | 21    | 55    |
| Drug/alcohol odor       | 3124  | 2209  | 695   | 163      | 3               | 16    | 38    |
| Incident to arrest      | 29199 | 20337 | 6949  | 1554     | 49              | 167   | 143   |
| Plain view contra.      | 2677  | 2020  | 531   | 88       | 1               | 13    | 24    |
| Reas. susp-weapon       | 1608  | 862   | 673   | 54       | 6               | 3     | 10    |
| Drug-dog alert          | 2352  | 2043  | 226   | 63       | 2               | 0     | 18    |
| Other                   | 951   | 727   | 185   | 29       | 0               | 3     | 7     |
| <b>What searched</b>    | .     | .     | .     | .        | .               | .     | .     |
| Driver                  | 18502 | 12754 | 4466  | 1044     | 37              | 111   | 90    |
| Car/property            | 10730 | 8174  | 1833  | 547      | 15              | 101   | 60    |
| Driver & Property       | 31929 | 24480 | 5957  | 1136     | 40              | 113   | 203   |
| <b>Search duration</b>  | .     | .     | .     | .        | .               | .     | .     |
| 0-15 minutes            | 55155 | 40523 | 11389 | 2525     | 89              | 311   | 318   |
| 16-30 minutes           | 5444  | 4443  | 778   | 173      | 4               | 12    | 34    |
| 31+ minutes             | 6444  | 966   | 159   | 5308     | 2               | 4     | 5     |
| <b>Contraband found</b> | .     | .     | .     | .        | .               | .     | .     |
| Drugs                   | 11036 | 9144  | 1593  | 228      | 8               | 29    | 34    |
| Alcohol                 | 2537  | 1928  | 358   | 203      | 2               | 19    | 27    |
| Currency                | 176   | 94    | 60    | 16       | 3               | 2     | 1     |
| Weapon                  | 1851  | 968   | 824   | 45       | 0               | 7     | 7     |
| Stolen property         | 544   | 377   | 142   | 16       | 0               | 0     | 9     |
| Other                   | 805   | 660   | 104   | 26       | 0               | 7     | 8     |

Table 5 Notes: Data reported by the agency to the Attorney General's Office covering all traffic stops in 2023.





# NON-COMPLIANT AGENCIES

- Belle Police Dept
- Berkeley Police Dept\*
- Blackburn Police Dept\*
- Country Club Village Police Dept
- Cuba Police Dept\*
- Duenweg Police Dept
- East Prairie Police Dept
- Fair Grove Police Dept\*
- Fairview Police Dept
- Farmington Police Dept
- Foley Police Dept\*
- Glasgow Police Dept
- Hawk Point Police Dept
- Holt County Sheriff's Office
- Kahoka Police Dept
- King City Police Dept
- Knob Noster Police Dept
- Lexington Police Dept\*
- Louisiana Police Dept
- Maplewood Police Dept
- Marceline Police Dept
- Marshfield Police Dept\*
- Matthews Police Dept
- Merriam Woods Police Dept
- Montgomery City Police Dept
- Morley Police Dept
- New Florence Police Dept
- Polo Police Dept
- Strasburg Police Dept
- Sugar Creek Police Dept
- Unionville Police Dept

\* Agency did not submit data by the statutory deadline, but did provide data for inclusion in the report.

# APPENDIX:

## WHY NO DISPARITY INDEX

Previous VSR reports have calculated a “Disparity Index” for traffic stops by race and ethnicity for the state overall and for each agency. However, after close study, the research team has recommended removing the disparity index from the VSR as it is of limited analytical value. The VSR already provides detailed information on traffic stops and rates relative to subgroup population, so no new objective information is provided by calculating the index. Moreover, as discussed below, the disparity index is not comparable across agencies serving populations with different demographic compositions and driving patterns, and it is often incorrectly interpreted.

Historically the “Disparity Index” was calculated as the ratio of a group’s share of traffic stops relative to that group’s share of the population. For example, if Black motorists account for 10% of traffic stops and account for 10% of the population, then the Disparity Index would be equal to one. This number is of limited value as it does not account for the peculiarities of a dynamic operating environment. For example, it considers neither the originating location of a stopped driver (e.g. a transient driver who is not part of the local population), nor the frequency with which an individual motorist is stopped (e.g. a motorist stopped for repeatedly violating the same school zone speed limit would be counted multiple times), both of which may artificially inflate the disparity index in a given community.

Moreover, the Index suffers from a variety of other comparative problems. Because the Disparity Index is a ratio, the units have no substantive meaning and cannot be reliably compared across communities with different demographic composition or within the same community as demographics change over time. A community with 50% Black population cannot have a Disparity Index for Black motorists greater than two, but a community with 10% black population could have a Disparity Index as high as ten.<sup>5</sup> And if both communities had a Disparity Index for Black drivers of two, it would mean very different things about the nature of traffic stops in each community. The same intuition applies to comparing within a single community over time as its population changes. The Index has limited interpretative value when comparing communities, because driving patterns are not similar across the State. For example, drivers in a larger region that has numerous small municipalities, such as the many towns and villages in northern St. Louis County with small geographic areas, may frequently cross municipal boundaries, whereas the frequency of cross-border driving patterns is less in other regions of the State. Consequently, the Disparity Index is something of a “rubber ruler” that is not directly comparable across different communities or over time, as population demographics change.

Due to the issues described above and the misleading simplicity of the disparity index, the VSR no longer reports the index, but still contains all the underlying stop information contained in prior reports and required to be collected by law.

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<sup>5</sup>For example, if only Black drivers were stopped in both communities, the disparity index would be 2 in the community with 50% Black population and 10 in the community with 10% of the population Black, even though in both communities only Black drivers were stopped. The community with 10% of the population Black would have a disparity index of 2 if 20% of their stops were of Black motorists instead of 100% of their stops, which is very different from the first community, yet the disparity index is the same.





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